

CLAIMS:

What is claimed is:

1. A method within an electronic device for communicating within a network of localized electronic devices, wherein said method comprises the steps of:

processing incoming and outgoing vibration wave messages in accordance with a network protocol; and

decoding a message-specific semantic of an incoming vibration wave message and encoding a message-specific semantic of an outgoing vibration wave message, such that said device may correspond in accordance with device-specific and message specific limitations.

2. The method of claim 1, wherein said processing step further comprises the steps of:

decoding said incoming vibration wave message; and

encoding said outgoing vibration wave message in accordance with said network protocol.

3. The method of claim 1, further comprising the step of receiving and translating said incoming vibration wave message into a digitized electronic signal.

4. The method of claim 3, wherein all network messages include a control message, and wherein said method further comprises the steps of:

1 reading said digitized electronic signal to identify
2 said control message;

3 terminating said digitized electronic signal in
4 response to failing to identify said control message; and

5 processing said digitized electronic signal in
6 response to identifying said control message.

1 5. The method of claim 2, wherein said encoding step is
2 followed by the step of generating and transmitting an
3 outgoing vibration wave message in accordance with said
4 network protocol.

5 6. The method of claim 5, wherein said generating and
6 transmitting step further comprises the steps of:

1 translating a digital signal from said protocol
2 interface macro into an analog signal; and

3 converting said translated analog signal into an
4 outgoing vibration wave message.
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1 7. The method of claim 1, wherein said device includes a
2 base media interface having an vibration signal table
3 which stores a plurality of predetermined vibration wave
4 signals, and wherein method further comprises encoding
5 said outgoing vibration wave message utilizing at least
6 one of said plurality of predetermined vibration wave
7 signals within said vibration signal table.

1 8. An electronic device comprising:

2 a base media interface within each of said plurality
3 of devices for processing incoming and outgoing vibration
4 wave messages in accordance with a network protocol; and

5 a device-specific logic in communication with said
6 base media interface for decoding a message-specific
7 semantic of an incoming vibration wave message and
8 encoding a message-specific semantic of an outgoing
9 vibration wave message, such that each of said plurality
10 of devices may correspond in accordance with device-
11 specific and message specific limitations.

12 9. The communication interface of claim 8, wherein said
13 base media interface comprises a protocol interface macro
14 for decoding said incoming vibration wave message and
15 encoding said outgoing vibration wave message in
16 accordance with said network protocol.

17 10. The communication interface of claim 9, wherein said
18 base media interface further comprises a transducer for
19 receiving and translating said incoming vibration wave
20 message into an electronic signal.

21 11. The communication interface of claim 10, wherein said
22 base media interface further comprises an analog-to-
23 digital converter for digitizing said electronic signal.

24 12. The communication interface of claim 9, wherein said
25 base media interface further comprises a vibration encoder
26 in communication with said protocol interface macro for

1 generating and transmitting an outgoing vibration wave
2 message in accordance with said network protocol.

1 13. The communication interface of claim 12, wherein said
2 vibration encoder comprises:

3 a digital-to-analog converter for converting a
4 vibration-encoded digital signal from said protocol
5 interface macro into an vibration-encoded analog signal;
6 and

7 a speaker for translating said vibration-encoded
8 analog signal into an outgoing vibration wave message.

1 14. The communication interface of claim 8, wherein said
2 base media interface includes a message table which stores
3 a plurality of predetermined vibration wave signals.

1 15. The communication interface of claim 14, wherein said
2 device-specific logic encodes said outgoing vibration wave
3 message utilizing at least one of said plurality of
4 predetermined vibration wave signals within said vibration
5 signal table.

1 16. The communication interface of claim 14, wherein said
2 base media interface further comprises computer processing
3 means that provides interactive processing among said
4 protocol interface macro, said vibration signal table, and
5 said device-specific logic.

1 17. The communication interface of claim 16, further
2 comprising a non-vibration feedback source in

1 communication with said computer processing means for
2 providing external non-vibration feedback control of said
3 outgoing vibration wave message.

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1 18. A method for processing a communication message with
2 another device, said method comprising the steps of:

3 transducing an incoming vibration signal into an
4 incoming electronic signal;

5 decoding said incoming electronic signal to determine
6 whether said incoming vibration signal is a network
7 message;

8 responsive to a determination that said incoming
9 vibration signal is not a network message, terminating
10 said incoming electronic signal;

11 responsive to a determination that said incoming
12 vibration signal is an incoming network message,
13 determining whether said incoming network message has been
14 previously received by said host device;

15 responsive to a determination that said incoming
16 vibration signal has been previously received by said host
17 device, terminating said incoming network message; and

18 responsive to a determination that said incoming
19 vibration signal has not been previously received by said
20 host device, transmitting said incoming network message as
21 an outgoing vibration message.

1 19. The method of claim 18, further comprising the steps
2 of decoding a semantic of said incoming network message
3 into a device-specific command in accordance with a

- 1 device-specific decoder and device-specific instructions
- 2 stored within said device-specific logic module.

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